



Batteries (Lead Acid)

Potential Environmental Impacts

If handled improperly, lead acid batteries removed from vehicles pose certain hazards. Battery components are toxic and corrosive, and can also be a fire and explosion hazard. Lead and sulfuric acid can contaminate the air, soil and water. Direct contact with sulfuric acid can burn the skin and eyes. Exposure to lead in the environment can pose a serious health hazard to children. Lead is also very toxic to aquatic life.



Batteries stored improperly

Legal Requirements

- ◆ Spent lead acid batteries must be recycled in Connecticut, and may not be disposed of with other solid wastes [RCSA Section 22a-241b-2(1)(H), CGS Section 22a-256g(a)].
 - ◆ If you sell lead acid batteries at your facility, you must accept a used lead acid battery for each new battery that is sold to a customer. Customers that are not returning a used battery at the time of a new battery purchase must pay a five-dollar deposit (sometimes referred to as a “core charge”). This deposit must be refunded to the customer if they return a used battery, with their purchase receipt for the new battery, within 30 days of purchase. If the customer does not return a used battery within 30 days, the retailer is allowed to keep the deposit. Retailers must post written notice informing consumers of these requirements. [CGS Sections 22a-256h and -256i].
 - ◆ There are **two options** for managing spent lead acid batteries prior to sending them for off-site reclamation. Batteries can be managed according to: (1) the Universal Waste Rule [RCSA Section 22a-449(c)-113, 40 CFR 273] or, alternatively, (2) under the special lead-acid battery recycling rules [RCSA Section 22a-449(c)-106(c)] (see below for requirements for both options).
1. **Universal Waste Rule requirements.** Facilities that store less than 5,000 kilograms (11,000 pounds) of spent lead-acid batteries would be classified as “Small Quantity Handlers” under these rules. Such handlers are required to do the following [40 CFR 273 Subpart B, RCSA Section 22a-449(c)-113(a)]:
 - Mark all batteries (or containers holding such batteries) with the words “Universal Waste-Batteries,” “Waste Batteries,” or “Used Batteries.”

- Store batteries for no more than one year before sending them off-site for recycling.
- Place any battery that shows signs of leakage, spillage, or damage in a container that is kept closed, is structurally sound, and is compatible with the contents of the battery.
- If there is a spill or release involving batteries or electrolyte (the fluid in the battery), immediately contain the spilled materials. Special spill kits for acid cleanup are commercially available. Avoid using rags or natural absorbents (e.g., corncobs, sawdust) because these could pose a fire hazard when used to clean up acid. Perform a hazardous waste determination on any spill cleanup residues and manage them in accordance with hazardous waste requirements (see Appendix A).
- Before shipping batteries off-site, ensure that they are packaged, marked, labeled, and placarded in accordance with U.S. Department of Transportation (DOT) rules for hazardous materials.
- Ship the batteries to another Universal Waste handler, or to an authorized destination facility for recycling. Prior to shipment, ensure that the receiving facility agrees to receive the shipment. Any shipments that are rejected must be taken back, or directed to another handler or destination facility.

In addition, if you transport batteries from one site to another, you must comply with Universal Waste transporter requirements [40 CFR 273 Subpart D].

2. Lead acid battery recycling rules. Persons managing their lead acid batteries under this set of rules must do the following [RCSA Section 22a-449(c)-106(c)]:

- Segregate batteries from paper, rags, garbage, flammables, scrap metal or hazardous chemicals by means of a dike, berm, wall or other physical barrier.
- Store spent lead acid batteries on an impervious surface (such as concrete sealed to protect the surface from degradation), and inspect spent lead acid batteries weekly for leaks and deterioration.
- Open, handle or store spent lead acid batteries so that the battery case does not rupture, leak, or produce short circuits.
- Although the lead-acid battery recycling rules do not specifically require it, before shipping batteries off-site, ensure that they are packaged, marked, labeled, and placarded in accordance with U.S. DOT rules for hazardous materials.

- ◆ Regardless of which set of rules lead-acid batteries are managed under, a hazardous waste determination must be conducted on spilled acid and broken lead acid batteries, and any materials used to clean a spill, to establish whether or not their disposal is subject to hazardous waste regulations [40 CFR 262.11; RCSA Section 22a-449(c)-102(a)(2)(A)]. Manage hazardous waste as described in Appendix A.

- ◆ Report the chemicals in lead acid batteries (sulfuric acid and lead) as part of your hazardous and toxic chemical inventory and notifications required under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) [40 CFR 355] if over 500 pounds of batteries are stored on-site. See Appendix B for more information on EPCRA requirements.

Best Management Practices

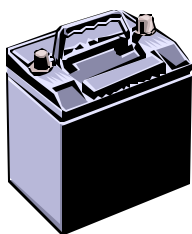
- ★ Avoid long-term storage of lead acid batteries by sending accumulated batteries to a reclaimer within six months of receipt. Limit accumulation of large quantities of spent batteries. If necessary, ship more frequently.
- ★ Store spent lead acid batteries upright in a secure location, protected from the elements.
- ★ Never stack batteries directly on top of each other. Store on acid-resistant racks or shelving, or layer with wood.
- ★ Never drain batteries or crack the casings.
- ★ Place cracked or leaking batteries in a sturdy, acid-resistant, leak-proof, sealed container (e.g., a sealable 5-gallon plastic pail). The container should be kept closed within the battery storage area.
- ★ Strap batteries to pallets or wrap batteries and pallet in plastic during transport.
- ★ Keep written records of weekly inspections of spent lead acid batteries.



Batteries protected from the elements

Pollution Prevention Checklist

- ✓ Do you store spent lead acid batteries in a covered area, either on acid-resistant shelving or layered with wood, if stacked? YES NO N/A



Did You Know?

Lead acid batteries top the list as the most highly recycled consumer product. Approximately 93% of all battery lead is recycled.

2004 Pit Stops Fact Sheets

Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127
Office of Pollution Prevention (860) 424-3297 www.dep.state.ct.us/wst/p2/vehicle/abindex.htm
Fact Sheet: DEP-P2-PITSTOPS-FS-003

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